

## REMARKS

This application has been reviewed further in light of the Office Action dated September 20, 2006. Claims 1-17, 51-58, and 72-101 remain pending in this application. Claims 1, 5, 51, 53, 72, 76, 77, 82, and 84 are in independent form. Claims 1, 5, 51, 53, 72, 76, 77, 82, and 84 have been amended herein. Favorable reconsideration is requested.

In the Office Action, Claims 5-9 and 53 were objected to for depending on a rejected base claim, but would be allowed if rewritten in independent form. The Examiner is thanked for that indication. Claims 5 and 53 have been amended to incorporate the recitations of their corresponding base claims. As such, those claims, as well as Claims 6-9 which depend directly or indirectly from Claim 5, are believed to be in condition for allowance.

Claims 1-4, 13, 14, 17, 51, 52, 56, 72-85, 87, 91, 95 and 99 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,477,288 (*Sato*). Claims 10-12, 54, 55, 86, 89, 90, 93, 94, 96, 98, and 100 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Sato*. Claims 15, 16, 57, 58, and 101 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Sato* in view of U.S. Patent No. 5,986,783 (*Sharma et al.*).

In support of the rejection, the Office Action states in section 8:

"... while *Sato* only teaches a pair of working fibers and a pair of protection fibers, *Sato* also teaches that each of the fibers carries a plurality of wavelengths within each fiber (column 8 lines 43-46). As one skill in the art knows, each of these wavelengths traverses a distinct path from the input

of the fiber to output of the fiber. As such, each switch of the node, while connected only to a pair of fibers, is coupled through a plurality of communication paths, e.g. each distinct path traversed by each wavelength within the fiber. Therefore, as noted in the office action, Sato continues to read on the claimed invention."

Without conceding the propriety of the foregoing assertions, Claim 1 has been amended to even further clarify that each first communication path is a working path including at least one optical fiber, and each second communication path is a protect path including at least one optical fiber. According to Claim 1, the first switch is coupled through plural first communication paths and plural second communication paths, respectively, to a first, adjacent one of the nodes, and the second switch is coupled through plural other first communication paths and plural other second communication paths, respectively, to a second, adjacent one of the nodes. *See*, for example, Fig. 3.<sup>1/</sup> *Sato* simply is not understood to teach or suggest these features.

As pointed out in the Preliminary Amendment filed on September 5, 2006, Fig. 5A and col. 14, lines 49-51 of *Sato* clearly reveal that switch 13 is connected to a component external to the optical line switching system 40 through only a *single* (not plural) working fiber 5 and only a *single* (not plural) protection fiber 7, which together form a pair "through which the optical signals are transmitted in the opposite directions...". Switch 14 is similarly connected to a component external to the optical line switching system 40 through only a *single* (not plural) working fiber 5 and only a *single* (not plural)

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<sup>1/</sup> It should be understood, of course, that Fig. 3 is referred to herein for illustrative purposes only, and the claims should not be construed as being limited only to the embodiment depicted.

protection fiber 7, where optical signals are transmitted in the opposite directions by virtue of the respective paths 5 and 7. In Claim 1, on the other hand, each first communication path is a working path including at least one optical fiber and each second communication path is a protect path including at least one optical fiber, wherein each switch is coupled to plural first communication paths *and* plural second communication paths.

Nothing in *Sato* is understood to teach or suggest those features in the context of the communication network set forth in Claim 1. Therefore, that claim is believed to be clearly patentable over *Sato*, and thus withdrawal of the Section 102(e) rejection of Claim 1 is requested.

Independent Claim 51 is a node claim having features similar in many relevant respects to those of Claim 1 emphasized above, and also is believed to be clearly patentable over *Sato* for the same reasons as those set forth above with respect to Claim 1.

Independent Claim 72, as amended, recites, in part, that at least one of the switches of at least one of the nodes is coupled to at least one of the switches of at least one other of the nodes through at least two working sub-paths including at least one optical fiber and at least two protect sub-paths including at least one optical fiber.

As pointed out above, in Fig. 5A of *Sato*, switch 13 is connected to a component external to the optical line switching system 40 through only a single working fiber 5 and only a single protection fiber 7, and the other switch 14 is connected to a component external to the optical line switching system 40 through only a single working fiber 5 and only a single protection fiber 7. Nothing has been found, or pointed out in *Sato*

that would teach or suggest the above-recited features of Claim 72. Accordingly, that claim is believed to be clearly patentable over *Sato*.

Independent Claim 76 recites, in part, at least one external communication path including at least two working sub-paths including at least one optical fiber and at least two protect sub-paths including at least one optical fiber, and that at least one switch of a line node is coupled to the at least two working paths and the at least two protect paths. Independent Claim 77 recites, in part, that the communication paths include at least two working sub-paths including at least one optical fiber and at least two protect sub-paths including at least one optical fiber, and at least one of the switches of the least one node is coupled to at least one of the switches of at least one other of the nodes through the at least two working sub-paths and the at least two protect sub-paths.

Again, as pointed out above, each switch 13 and 14 depicted in Fig. 5A of *Sato* is connected to only a single working fiber and only a single protect fiber. Nothing has been found, or pointed out in *Sato* that would teach or suggest the foregoing features of Claims 76 and 77 relating to each switch being coupled to at least two working paths including at least one optical fiber and at least two protect paths including at least one optical fiber. Therefore, Claims 76 and 77 are believed to be clearly patentable over *Sato* as well.

Independent Claims 82 and 84 have been amended to even further clarify that at least one of the switches is coupled to plural working paths including at least one optical fiber and plural protect paths including at least one optical fiber. Those claims also are believed to be clearly patentable over *Sato* because that reference is not seen to teach or

suggest those features in the context of the invention claimed in those respective claims.

A review of both *Sharma et al.* patents has failed to reveal anything which is understood to remedy the above-described deficiencies of *Sato* against the independent claims herein. Accordingly, those claims are believed to be patentable over both of those references as well.

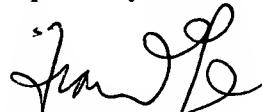
The other pending claims in this application are each dependent from one or another of the independent claims discussed above and also are believed to be patentable over the art relied on in the Office Action for the same reasons as are those independent claims. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

#### CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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